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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/681,422	10/08/2003	William J. van Ooij	UOC / 171	7421
26875 7590 09/25/2008 WOOD, HERRON & EVANS, LLP 2700 CAREW TOWER 441 VINE STREET CINCINNATI, OH 45202			EXAMINER FEELY, MICHAEL J	
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			1796	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/681,422

Applicant(s)

VAN OOIJ ET AL.

Examiner

Michael J. Feely

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 June 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 26-35, 37-43, 46-55, 97 and 99 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 26-35, 37-43, 46-55, 97 and 99 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Pending Claims

Claims 26-35, 37-43, 46-55, 97, and 99 are pending.

Response to Amendment

1. The rejection of claims 26-35, 42, 43, and 97 under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Van Ooij et al. (WO 00/63462) has been overcome by amendment.
2. The rejection of claims 26-35, 42, 43, and 97 under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Van Ooij et al. (US Pat. No. 6,416,869) has been overcome by amendment.
3. The rejection of claims 26-35, 42, 43, and 97 under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Van Ooij et al. (US Pat. No. 6,756,079) has been overcome by amendment.
4. The rejection of claim 41 under 35 U.S.C. 103(a) as being unpatentable over {Van Ooij et al. (WO 00/63462) or Van Ooij et al. (US Pat. No. 6,416,869) or Van Ooij et al. (US Pat. No. 6,756,079)} has been overcome by amendment.
5. The rejection of claim 36 under 35 U.S.C. 103(a) as being unpatentable over {Van Ooij et al. (WO 00/63462) or Van Ooij et al. (US Pat. No. 6,416,869) or Van Ooij et al. (US Pat. No. 6,756,079)} in view of Shimakura et al. (US Pat. No. 6,475,300) has been rendered moot by the cancellation of this claim. The subject matter of claim 36 has been incorporated into claim 26.

6. The rejection of claims 26-35, 41-43, and 97 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over the combined limitations of claims 7-19, 24-31 & 33 of U.S. Patent No. 6,756,079 has been overcome by amendment.

7. The rejection of claim 36 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over the combined limitations of claims 7-19, 24-31 & 33 of U.S. Patent No. 6,756,079 in view of Shimakura et al. (US Pat. No. 6,475,300) has been rendered moot by the cancellation of this claim. The subject matter of claim 36 has been incorporated into claim 26.

Claim Rejections - 35 USC § 103

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

9. Claims 26-35, 37-43, 46-55, 97, and 99 are rejected under 35 U.S.C. 103(a) as being unpatentable over {Van Ooij et al. (WO 00/63462) or Van Ooij et al. (US Pat. No. 6,416,869) or Van Ooij et al. (US Pat. No. 6,756,079)} in view of Shimakura et al. (US Pat. No. 6,475,300).

Both (WO 00/63462) and (US Pat. No. 6,756,079) are child documents of (US Pat. No. 6,416,869). All three references disclose substantially equivalent subject matter. Accordingly, all citations are directed to (US Pat. No. 6,756,079) to streamline the following prior art rejection. Specific citations for (WO 00/63462) and (US Pat. No. 6,416,869) can be found in the previous office action.

Regarding claims 26-35, 37-40, 42, 43, and 97, Van Ooij et al. disclose: **(26)** a method of bonding *rubber* to a metal substrate (Abstract; column 9, lines 21-50; *claims 7-19, 24-31 & 33*), the method comprising:

(a) applying a silane solution comprising a substantially hydrolyzed bis amino-silane and a substantially hydrolyzed bis sulfur-containing silane to at least a portion of a surface of a metal substrate (column 6, line 39 through column 11, line 50; *claims 7-19, 24-31 & 33*);

(b) drying the silane solution on the metal substrate to form a coating (column 8, lines 46-60; *claims 7-19, 24-31 & 33*); and

(c) applying an uncured *sulfur curable rubber* onto the surface of the metal substrate having the coating thereon and *sulfur curing* the *rubber* to bond the *rubber* to the coated metal substrate (column 8, line 61 through column 9, line 61; *claims 7-19, 24-31 & 33*);

(27) further comprising, prior to applying the solution: mixing a bis amino-silane and a bis sulfur-containing silane separately with an aqueous-based medium to substantially hydrolyze the bis amino-silane and the bis sulfur silane; and mixing the hydrolyzed bis amino-silane and the hydrolyzed bis sulfur-containing silane together to form the solution to be applied to the metal substrate (column 6, lines 54-58; *claims 7-19, 24-31 & 33*); **(28)** wherein the aqueous-based medium comprises water and alcohol (column 6, lines 40-58; *claims 7-19, 24-31 & 33*); **(29)** wherein the bis amino-silane is a compound of the general formula (I) *see claim for details* (column 9, line 51 through column 11, line 8; *claims 7-19, 24-31 & 33*); **(30)** wherein the bis amino silane is selected from the group consisting bis(trimethoxysilylpropyl)ethylene diamine, bis(trimethoxysilylpropyl) amine, and combinations thereof (column 9, line 51 through column 11, line 8; *claims 7-19, 24-31 & 33*); **(31)** wherein the bis sulfur-containing silane is a compound

of the general formula (II) *see claim for details* (column 11, line 9 though column 12, line 29; *claims 7-19, 24-31 & 33*); (32) wherein the bis sulfur-containing silane is selected from the group consisting of bis(trimethoxysilylpropyl) disulfide, bis(trimethoxysilylpropyl) tetrasulfide, and combinations thereof (column 11, line 9 though column 12, line 29; *claims 7-19, 24-31 & 33*);

(33) wherein the solution comprises a ratio of the hydrolyzed bis amino-silane to the hydrolyzed bis sulfur-containing silane in a range from about 1:4 to about 4:1 by volume (column 8, lines 1-27; *claims 7-19, 24-31 & 33*);

(34) wherein the solution comprises a ratio of the hydrolyzed bis amino-silane to the hydrolyzed bis sulfur-containing silane of about 1:1 by volume (column 8, lines 1-27; *claims 7-19, 24-31 & 33*);

(35) wherein applying the solution to the metal substrate comprises dipping the metal substrate in the solution (column 8, line 28-45; *claims 7-19, 24-31 & 33*);

(43) wherein curing comprises applying heat and pressure to the *rubber* and coated metal substrate to form a bond there between (column 15, lines 11-19; *claims 7-19, 24-31 & 33*); and

(97) wherein the *sulfur curable rubber* is selected from the group consisting of natural rubber, synthetic rubber, and combinations thereof (column 9, lines 21-50; *claims 7-19, 24-31 & 33*).

The teachings of Van Ooij et al. are silent regarding: (26) the presence of a nano-size particulate material in the silane solution; (37) wherein the nano-size particulate material is selected from the group consisting of silica, zinc oxide, and combinations thereof; (38) wherein the nano-size particulate material has an average particle size of about 0.1 μm or less; (39)

wherein the nano-size particulate material is silica in a concentration range from about 10 ppm to about 1% by weight of the solution; and **(40)** wherein the nano-size particulate material is silica and in a concentration range from about 50 ppm to about 1000 ppm of the solution. It should be noted that this particulate filler is an *inert material* which would not have participated in or interfered with (*the chemical reactions of*) the bonding mechanism of Van Ooij et al.

Shimakura et al. also disclose a silane-based intermediate (*primer*) layer for metal substrates (Abstract; column 2, lines 29-32). After the silane-based treatment is applied, a topcoat is applied, wherein the silane-based coating imparts corrosion resistance to the metal substrate. In addition to their silanes, they disclose, "The metallic surface-treatment agent of the present invention comprises water-dispersible silica. The water-dispersible silica which can be used is not particularly restricted...The spherical silica includes colloidal silica such as *Snowtex N*, *Snowtex UP*...The above water-dispersible silica is formulated in a concentration of 0.05 to 100 g/l, preferably 0.5 to 60 g/l...If the concentration of water-dispersible silica is less than 0.05 g/l, the corrosion resistance-improving effect will be insufficient, while the use of silica in excess of 100 g/l will not be rewarded with any further improvement in corrosion resistance but rather detract from bath stability of the metallic surface-treating agent," (*see column 3, lines 19-40*).

The teachings of Shimakura et al. demonstrate the following: (1) that nano-size silica having an average particle size of about 0.1 μm or less (*see product sheet for Snowtex products*) is recognized in the art as a suitable *inert* additive for silane-based primers, providing enhanced corrosion-resistance properties to the primer; and (2) that the concentration of the silica nano-particles is a result effective variable, ensuring desired corrosion-resistance and bath stability.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide silica nano-particles in an optimized concentration range, as taught by Shimakura et al., in the solutions of Van Ooij et al. because the teachings of Shimakura et al. demonstrate: (1) that nano-size silica having an average particle size of about 0.1 μm or less (*see product sheet for Snowtex products*) is recognized in the art as a suitable *inert* additive for silane-based primers, providing enhanced corrosion-resistance properties to the primer; and (2) that the concentration of the silica nano-particles is a result effective variable, ensuring desired corrosion-resistance and bath stability.

The combined teachings of Van Ooij et al. and Shimakura et al. fail to explicitly disclose: **(26)** a coating thickness in the range from about 0.1 μm to about 1 μm ; and **(42)** a coating thickness in the range from about 0.2 μm to about 0.6 μm . Rather, Van Ooij et al. disclose coating conditions featuring: (a) mixed hydrolyzed silane solutions at 5% volume; (b) a dipping technique; (c) an immersion time of 30-45 seconds; and (d) subsequent drying (*Example 1: see column 14, line 55 through column 16, line 45, particularly column 15, lines 6-10*).

Turning to the instant specification, Applicant discloses: "As discussed above, coating thicknesses may be determined by *concentration of the silane solution* and *length of contact time* between the solution and the metal. For example, a 5% silane solution contacted with the metal for at least about 30 seconds generally provides a film thickness of about 0.3 μm to about 0.4 μm after drying," (*see paragraph 0048 of the Specification or paragraph 0080 of the corresponding pre-publication*).

In addition to disclosing the instantly claimed metal substrate, silane solution, and sulfur cured rubber, Van Ooij et al. also disclose the same coating parameters utilized in the instant

invention, including concentration of the silane solution and length of contact time between the solution and the metal. By Applicant's own admission, *a 5% silane solution* contacted with the metal for *at least about 30 seconds* generally provides a film thickness of *about 0.3 μm to about 0.4 μm* after drying. Furthermore, it should be noted that there is no evidence to suggest that this relationship between coating parameters and coating thickness is exclusive to the instant invention. In light of this, it appears that the method of Van Ooij et al. (in view of Shimakura et al.) would have inherently provided a coating thickness in the range from about 0.1 μm to about 1 μm (*preferably in the range from about 0.2 μm to about 0.6 μm*). Otherwise, the method of Van Ooij et al. (in view of Shimakura et al.) would have rendered the instant invention obvious because their method yields a composite material featuring improved adhesion characteristics (and enhanced corrosion resistance) between a metal substrate and a sulfur cured rubber (*see Summary of Invention and Example 1 of Van Ooij et al.*)

Therefore, if not explicitly taught by Van Ooij et al. (in view of Shimakura et al.), then the method of Van Ooij et al. and Shimakura et al. would have rendered the instant invention obvious because their method yields a composite material featuring improved adhesion characteristics (and enhanced corrosion resistance) between a metal substrate and a sulfur cured rubber.

Regarding claim 41, Van Ooij et al. disclose a drying step (*see: column 15, lines 6-10*) of their 5% (*silane*) solution featuring 5% silane, 5% water, and 90% alcohol, such as ethanol or methanol (*see: column 14, line 56 column 15, line 5*). However, they fail to explicitly disclose: (*41*) wherein drying comprises heating the silane solution on the metal substrate to a temperature of *at least about 60°C*.

It should be noted that the boiling points of water, ethanol, and methanol are all above 60°C. Therefore, a drying temperature of *at least about 60°C* would have been an obvious choice for the skilled artisan to drive off the water and alcohol in a reasonable time frame.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use a drying temperature of at least about 60°C in the method of Van Ooij et al. (in view of Shimakura et al.) because they use a 5% (*silane*) solution featuring 5% silane, 5% water, and 90% alcohol, such as ethanol or methanol. This drying temperature would have been an obvious choice for the skilled artisan to drive off the water and alcohol in a reasonable time frame because the boiling points of water, ethanol, and methanol are all above 60°C.

Regarding claims 46-55, and 99, the combined teachings of Ooij et al. and Shimakura et al. are as set forth above and incorporated herein to obviously satisfy all of the limitations set forth in claims 46-55 and 99.

Double Patenting

10. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned

with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

11. Claims 26-35, 37-43, 46-55, 97, and 99 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over the combined limitations of claims 7-19, 24-31 & 33 of U.S. Patent No. 6,756,079 in view of Shimakura et al. (US Pat. No. 6,475,300).

The obviousness rejection over Van Ooij et al. in view of Shimakura et al. is as set forth above and incorporated herein. The inherency and obviousness positions are as set forth above and incorporated herein.

The patented claims are deficient in that they do not disclose the following: (a) the mixing sequence of instant claims 27 & 46; (b) the thickness limitations of instant claims 26, 42, 46 & 55; (c) the dipping technique of instant claim 35; (d) the nano-particle limitations of instant claims 26-35, 37-43, 46-55, 97, and 99; (e) the temperature limitation of instant claims 41; and (f) the heat & pressure limitations of instant claim 43.

With respect to (a), this mixing sequence would have been clearly envisaged by the skilled artisan in light of the specification (*see column 6, lines 54-58; Example 1*) – see MPEP 804 II. B. 1. & *In re Vogel*, 422 F.2d 438, 441-42, 164 USPQ 619, 622 (CCPA 1970).

With respect to (b & c), the thickness limitations and dipping technique would have been clearly envisaged by the skilled artisan in light of the specification (*see column 8, lines 28-45; Example 1*) – see MPEP 804 II. B. 1. & *In re Vogel*, 422 F.2d 438, 441-42, 164 USPQ 619, 622

(CCPA 1970). The exemplary dipping technique would have inherently produced instantly claimed coating thickness for the reasons set forth above in the obviousness rejection.

With respect to (d), the nano-particle limitations would have been obvious in view of Shimakura et al. for the reasons set forth above in the obviousness rejection.

With respect to (e), the temperature limitation would have been obvious for the reasons set forth above in the obviousness rejection (*see Example 1*) – see MPEP 804 II. B. 1. & *In re Vogel*, 422 F.2d 438, 441-42, 164 USPQ 619, 622 (CCPA 1970).

With respect to (f), the heat & pressure limitations would have been clearly envisaged by the skilled artisan in light of the specification (*see Example 1*) – see MPEP 804 II. B. 1. & *In re Vogel*, 422 F.2d 438, 441-42, 164 USPQ 619, 622 (CCPA 1970).

Response to Arguments

12. Applicant's arguments filed June 18, 2008 have been fully considered but they are not persuasive.

13. Applicant has expressed concern over the duplicate nature of the prior art rejections (*see pages 11 and 12 of the response*). Specifically, Applicant is concerned that these rejections are contributing to the back log of cases at the USPTO.

Rejections over the three Van Ooij et al. references stand, as set forth above. However, in an effort to address Applicant's concerns, the rejections have been consolidated. Both (WO 00/63462) and (US Pat. No. 6,756,079) are child documents of (US Pat. No. 6,416,869), wherein all three references disclose substantially equivalent subject matter. All citations are now

directed to (US Pat. No. 6,756,079) to streamline the prior art rejection. Specific citations for (WO 00/63462) and (US Pat. No. 6,416,869) can be found in the previous office action.

On a related note, Applicant should keep in mind the following: (1) the instant application features two RCE filings; (2) the Van Ooij et al. references are commonly assigned; and (3) the substantially duplicate nature of the instant invention, with respect to the Van Ooij et al. references, has been demonstrated throughout the prosecution of this application. These factors also have the effect of unnecessarily adding to the significant backlog of cases.

14. In response to applicant's argument that Shimakura et al. is nonanalogous art (*see pages 15 & 18 of the response*), it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992).

In this case, the supporting reference is reasonably pertinent to the particular problem with which the applicant was concerned: *using a silane based material as in intermediate bonding layer (primer), wherein the silane layer provides corrosion resistance and adhesion properties*. Applicant's assertion that a supporting reference must disclose a rubber topcoat is not proper. This is particularly the case since Applicant contemplates polymeric top layers other than "rubber" (*see Abstract; paragraph 0050 of the Specification*).

15. Regarding the Applicant's unexpected results (*see page 16 of the response*), there is no evidence of record showing that the nanosize particulate materials provide improved and unexpected adhesion properties. All of the working examples (*see paragraphs 0055-0066 of the Specification*) feature the nanosize particulate material; however, there is no comparison data to

isolate the impact of the nanosize particulate material on adhesion properties. It is suggested that Applicant reproduce at least a portion of these working examples without using the nanosize particulate. Such a showing of unexpected results may overcome the obviousness rejection.

16. In response to Applicant's argument that there is no suggestion to combine the references (*see pages 15-18 of the response*), the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

In this case, Applicant concedes that the primary references are concerned with corrosion resistance. However, Applicant takes the position that the primary references do not demand or require *enhanced* corrosion resistance, wherein the addition of an unnecessary or unneeded material is counterproductive.

The Examiner respectfully disagrees. Certain properties, particularly corrosion resistance, can always be improved. Such an improvement is not counterproductive. Furthermore, there is no disclosure in the primary references that would exclude these materials from being added. These materials are non-reactive and added in small quantities. In light of this, one would not expect the addition of these materials to have a detrimental effect on the primer of the primary references. Rather, they would enhance corrosion resistance, as suggested by Shimakura et al.

17. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning (*see page 18 of the response*), it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Conclusion

18. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Feely whose telephone number is (571)272-1086. The examiner can normally be reached on M-F 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Y. Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael J Feely/
Primary Examiner, Art Unit 1796

September 22, 2008